UNIVERSITI TEKNOLOGI MARA

CREATING AWARENESS ON HAND, FOOT, AND MOUTH DISEASE (HFMD) FOR PRE-SCHOOLERS USING GAMIFICATION

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STUDENT DECLARATION

I certify that this thesis and the project to which it refers is the product of my own work and that any idea or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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ABSTRACT

Hand, foot and mouth disease (HFMD) were once considered a disease of cattle, has been emerging as a common human childhood disease in the last few years. This disease can cause fatal injuries to the patient where most of them are children. There should be awareness activity about this disease among children. In digital age, technology is prevalent in modern society. Thus, technology can bring into the health care areas to provide a new experience for people. A health care game was designed to create awareness on HFMD. The game helps them increase the sense of awareness about HFMD along with having fun. This project included gamification as a platform. Several related projects were reviewed as a guideline to develop the game on health with game design elements. The HFMD Gamification was developed by using the ADDIE methodology. Five phases of the ADDIE methodology were Analysis, design, develops implements, and evaluate were used to complete the HFMD Gamification. A usability testing with real users was conducted to evaluate the project. The survey method applied by providing the questionnaire to 15 respondents at the age of four to six years old in term of understanding and usability of the gamification on design elements. From the 15 respondents, there were 27% of female and 73% of male respondents. The questionnaire was divided in three sections which are User Interface Satisfaction, Usefulness on Design Elements, and Usability. The questionnaire is scaled from one to three where one represented as disagreed, two as neutral, and three as agreed. The results shows that the mean for User Interface Satisfaction is 2.882, for Usefulness on Design Elements is 2.92, and mean for Usability is 2.95. There is limitation identified in the developed application which is the application was not having verbal instruction. Furthermore, there were also recommendations suggested to improve the HFMD Gamification in the future such as to include verbal instructions, and to have bilingual for the HFMD Gamification The importance of this project is to create awareness about HFMD among children in fun and attractive ways was achieved.

Keywords: awareness, Gamification, methodology, usability.

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